CLAIMS

1. A mold-supporting apparatus comprising:

(a) a mold-mounting portion having a mold-mounting surface to which a mold is mounted; and

(b) a rear surface portion having reaction-force-receiving portions at corners thereof, the reaction-force-receiving portions receiving reaction force from a reaction force applying member, the mold-supporting apparatus being characterized in that

(c) a central region of the mold-mounting portion and a central region of the rear surface portion are connected together by means of a central connection member, and

(d) an outer peripheral portion of the mold-mounting portion and an outer peripheral portion of the rear surface portion are connected together by means of an outer peripheral portion connection member.

2. A mold-supporting apparatus according to claim 1, wherein an annular cavity portion is formed between the mold-mounting portion and the rear surface portion to surround the central connection member.

3. A mold-supporting apparatus according to claim 1 or 2, wherein the central connection member has a straight or symmetric outer peripheral shape with respect to the axial direction thereof.

4. A mold-supporting apparatus according to any one of claims 1 to 3, wherein the central connection member comprises a single member connecting a central portion of the

mold-mounting portion and a central portion of the rear surface portion.

5. A mold-supporting apparatus according to any one of claims 1 to 3, wherein the central connection member comprises a plurality of members connecting a central region of the mold-mounting portion and a central region of the rear surface portion.

6. A mold-supporting apparatus according to any one of claims 1 to 5, wherein the outer peripheral portion connection member connects the mold-mounting portion and the rear surface portion along their outer peripheral portions of four sides or two sides.

7. A mold-supporting apparatus according to any one of claims 1 to 6, wherein a step is present between a mold-mounting-side surface of the reaction force receiving portion and the mold-mounting surface of the mold-mounting portion.

8. A mold-supporting apparatus according to any one of claims 1 to 7, wherein

(a) the rear surface portion includes a mounting portion which is secured to a frame for supporting a mold-clamping apparatus of a molding machine, and

(b) the mounting portion is provided at a location such that deformation of the rear surface portion in the vertical direction is suppressed.

9. A molding machine comprising a mold-supporting apparatus according to any one of claims 1 to 8.

10. A molding method of producing a molded product by use of

a mold-supporting apparatus according to any one of claims 1 to 8.

11. A molding method characterized in that

(a) the molding method is a molding method for charging resin into a cavity of a mold apparatus composed of a stationary mold mounted to a stationary-mold-supporting apparatus and a movable mold mounted to a movable-mold-supporting apparatus to thereby produce a molded product;

(b) the stationary-mold-supporting apparatus or the movable-mold-supporting apparatus being configured such that a central region of a mold-mounting portion and a central region of a rear surface portion are connected together by means of a central connection member, and an outer peripheral portion of the mold-mounting portion and an outer peripheral portion of the rear surface portion are connected together by means of an outer peripheral portion connection member, the method comprising:

(c) a step in which the movable mold is pressed against the stationary mold by means of a mold-clamping force of a mold clamping apparatus;

(d) a step in which the mold-clamping force is transmitted from the mold-mounting portion to the rear surface portion via at least one of the central connection member and the outer peripheral portion connection member;

(e) a step in which a reaction force of the mold-clamping force is received by reaction force receiving portions at corner portions of the rear surface portion; and

(f) a step in which molten resin is injected under high pressure and is charged into the cavity.

12. A box-shaped mold-supporting apparatus

(a) used in a mold-clamping apparatus which advances and retreats a movable mold through drive of a drive section so as to generate a mold-clamping force between the movable mold and a stationary mold, wherein a mold-mounting surface to which the stationary mold or the movable mold is mounted has a predetermined thickness, the mold-supporting apparatus being characterized in that

(b) an annular cavity portion is formed in the mold-supporting apparatus; and

(c) a through hole communicating with the cavity portion is formed in a surface adjacent to the mold-mounting surface.